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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Petersen et al.

Group Art Unit: Unassigned

Application No. Unassigned
(U.S. National Phase of PCT/DK00/00319

Examiner: Unassigned

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For: A HEAT EXCHANGE PLATE AND SUCH A PLATE WITH A GASKET

PENDING CLAIMS AS OF DECEMBER 13, 2001

1. A heat exchanger plate for a plate-type heat exchanger, said plate comprising a gasket groove in the form of an indentation that extends, at least across the portion of the plate, close to the periphery of the plate and is, at intervals, provided with an expanded portion for receiving a coupling element on an associated gasket, said expanded portion being situated substantially in the same place as the gasket groove itself, wherein there is, in connection with each of the expanded portions of the gasket groove, by cutting and ridging of the plate material provided at least two openings substantially perpendicular to the longitudinal direction of the gasket groove, said coupling element, wherein in the expanded portion and substantially perpendicular to the gasket groove there is provided at least one ridged, tongue-like portion, wherein the openings are located at each side of the tongue-like portion between this and the expanded portion of the gasket groove.

2. A heat exchanger plate according to claim 1, wherein one ridged, tongue-like portion is provided centrally in the expanded portion.

3. A heat exchanger plate according to claim 1, wherein two ridged, tongue-like portions are provided at a distance from each other in the expanded portion.

4. A heat exchanger plate according to claim 1, wherein a gasket is provided, said coupling element of the gasket comprises protruding flaps that are able to engage with the openings.

5. A heat exchanger plate according to claim 4, wherein one ridged, tongue-like portion is provided centrally in the expanded portion; and that the coupling element of the gasket comprises two protruding flaps that are configured for engaging with the openings provided at each side of the tongue-like portion.

6. A heat exchanger plate according to claim 4, wherein two ridged, tongue-like portions are provided at a distance from each other in the expanded portion; and that the coupling element of the gasket comprises a protruding flap configured for engaging the two central and mutually facing openings provided at each their tongue-like portion.

7. A heat exchanger plate according to claim 4, wherein two ridged, tongue-like portions are provided at a distance from each other in the expanded portion; and that the coupling element of the gasket comprises two outwardly protruding flaps that are configured for engaging with the two mutually most distant openings provided at each their tongue-like portion.

8. A heat exchanger plate according to claim 4, wherein the flaps on the coupling elements of the gasket extend partially into the openings.

9. A heat exchanger plate according to claim 4, wherein the flaps on the coupling elements of the gasket press on the openings without extending considerably into the same.

10. A heat exchanger plate according to claim 4, wherein the coupling element of the gasket is provided with a superjacent pressure element.

11. A heat exchanger plate according to claim 5, wherein the flaps on the coupling elements of the gasket extend partially into the openings.

12. A heat exchanger plate according to claim 6, wherein the flaps on the coupling elements of the gasket extend partially into the openings.

13. A heat exchanger plate according to claim 7, wherein the flaps on the coupling elements of the gasket extend partially into the openings.

14. A heat exchanger plate according to claim 5, wherein the flaps on the coupling elements of the gasket press on the openings without extending considerably into the same.

15. A heat exchanger plate according to claim 6, wherein the flaps on the coupling elements of the gasket press on the openings without extending considerably into the same.

16. A heat exchanger plate according to claim 7, wherein the flaps on the coupling elements of the gasket press on the openings without extending considerably into the same.

17. A heat exchanger plate according to claim 5, wherein the coupling element of the gasket is provided with a superjacent pressure element.

18. A heat exchanger plate according to claim 6, wherein the coupling element of the gasket is provided with a superjacent pressure element.

19. A heat exchanger plate according to claim 7, wherein the coupling element of the gasket is provided with a superjacent pressure element.

20. A heat exchanger plate according to claim 8, wherein the coupling element of the gasket is provided with a superjacent pressure element.

21. A heat exchanger plate according to claim 9, wherein the coupling element of the gasket is provided with a superjacent pressure element.